



Image

1645

Attorney Docket Number 2000.605 US PD

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
JACOBS ET AL

Serial No.: 10/034,500

Group Art Unit: 1645

Filed: December 20, 2001

Examiner: P. Baskar

For: LAWSONIA INTRACELLULARIS VACCINE

SUBMISSION OF SEQUENCE LISTING

Commissioner of Patents
Alexandria, VA 22313

November 11, 2003

Sir:

Applicants are submitting herewith the Sequence Listing for the above-identified application both in paper copy form and in computer readable form. A paper copy of the Sequence Listing was also submitted October 29, 2003 in response to the Office Action of April 29, 2003. No new matter is added hereby.

The name of the file on the computer readable form is 2000605SEQLIST.ST25. The paper copy and the computer readable form are the same. No new matter is added hereby.

Please replace the current sequence listing in the specification with the instant sequence listing.

Respectfully submitted,

William P. Ratz Reg. No. 44,295

For William M. Blackstone
William M. Blackstone
Attorney for Applicants
Registration No. 29,772

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Intervet Inc. Patent Department
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2000.605
10/034,500**Certificate of Mailing under 37 CFR 1.8**

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Katrina Mears

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2000605SEQLIST.ST25
SEQUENCE LISTING

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Ala Met Pro Lys Met Ser Tyr Gln Gly Gly Leu Tyr Thr Phe Ala Pro
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Tyr Ser Val Ile Ile Pro Gln Gly Ser Trp Asn Ser Cys Val Ala Glu
65 70 75 80
tgt gcg gtt aat aca att aag tct gat tta gaa att ttt ggt cgt ctt 288
Cys Ala Val Asn Thr Ile Lys Ser Asp Leu Glu Ile Phe Gly Arg Leu
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Thr Pro Val Gly Asp Gly Ile Lys Met His Glu Thr Val Ile Asn Gln
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Met Pro Pro Gln Ala Ala Val Ile Leu Leu Thr Asp Gly His Asn Asn
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2000605SEQLIST.ST25

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cct aat gtt tgt ttt cat gta gtt tca ttt gca gat gat gct gaa ggc	480
Pro Asn Val Cys Phe His Val Val Ser Phe Ala Asp Asp Ala Glu Gly	
145 150 155 160	
aaa gca ata att gat caa att gtt gca ctt aat agt gga agt gtt ctt	528
Lys Ala Ile Ile Asp Gln Ile Val Ala Leu Asn Ser Gly Ser Val Leu	
165 170 175	
gtt gat ggt tta cag ctt cta caa aat cct gct gtt tgc caa gaa ttt	576
Val Asp Gly Leu Gln Leu Leu Gln Asn Pro Ala Val Cys Gln Glu Phe	
180 185 190	
gtt aat agt gtt ttt tgt caa gag caa att ctt gtt aca gaa gaa gtt	624
Val Asn Ser Val Phe Cys Gln Glu Gln Ile Leu Val Thr Glu Glu Val	
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2000605SEQLIST.ST25

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145 150 155 160

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Lys Gln Arg Leu Arg Thr Gln Ile Asp Ile Val Ala Ser Glu Ser Leu
35 40 45

aag ggt gtt gta ttc ttt gaa tta ggt aag act atc tgg gga cgt ggt 192
Lys Gly Val Val Phe Phe Glu Leu Gly Lys Thr Ile Trp Gly Arg Gly

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cgt Arg	atg Met	ggt Gly	tta Leu 100	caa Gln	cct Pro	tat Tyr	gtc Val	ctt Leu 105	cca Pro	gga Gly	ttt Phe	gtt Val	gca Ala 110	ggg Gly	tct Ser	336
aca Thr	ata Ile	tta Leu 115	gat Asp	gct Ala	gat Asp	gga Gly	gca Ala 120	ggt Gly	gtt Val	act Thr	gtt Val	tct Ser 125	gct Ala	gta Val	ttt Phe	384
aat Asn	gat Asp 130	tat Tyr	tta Leu	ggt Gly	gct Ala	aca Thr 135	gct Ala	ttc Phe	tgg Trp	atg Met	cgt Arg 140	gca Ala	ttg Leu	cat His	aaa Lys	432
aac Asn 145	tat Tyr	gat Asp	agt Ser	aat Asn	tat Tyr 150	gga Gly	ata Ile	tca Ser	aag Lys	cta Leu 155	cct Pro	aac Asn	ttt Phe	aaa Lys	ggg Gly 160	480
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tta Leu	cca Pro 210	gca Ala	atg Met	cca Pro	gca Ala	gga Gly 215	ttt Phe	gga Gly	tat Tyr	agc Ser	tgg Trp 220	gga Gly	gct Ala	ggg Gly	aat Asn	672
cca Pro 225	ttt Phe	gga Gly	gat Asp	ggt Val	ttt Phe 230	cca Pro	aat Asn	aaa Lys	aag Lys	cgt Arg 235	ggt Gly	aat Asn	gca Ala	tgg Trp	tgg Trp 240	720
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gtt Val	gat Asp	ggt Gly	gct Ala 260	tat Tyr	gga Gly	cga Arg	gca Ala	gac Asp 265	tta Leu	gga Gly	agt Ser	ctt Leu	aga Arg 270	aat Asn	gtt Val	816
gtt Val	att Ile	ggt Gly 275	gac Asp	ttc Phe	tta Leu	cta Leu	gat Asp 280	aag Lys	att Ile	gat Asp	tta Leu	aaa Lys 285	cgt Arg	caa Gln	ggg Gly	864

2000605SEQLIST.ST25

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gcc	tct	aaa	aga	ata	cca	aca	tta	gtt	gga	aac	tgg	tca	gca	aca	agt	1008
Ala	Ser	Lys	Arg	Ile	Pro	Thr	Leu	Val	Gly	Asn	Trp	Ser	Ala	Thr	Ser	
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Asn	Thr	Ile	Ala	Gly	Ser	Trp	Gly	Val	Val	Val	Gln	Leu	Lys	Asp	Ile	
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Thr	Thr	Ile	Tyr	Asp	Thr	Arg	Gly	Gly	Asp	Asn	Met	Leu	Tyr	Leu	Thr	
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Tyr	Lys	Asp	Leu	Ser	Val	Ala	Leu	Glu	Leu	Ser	Tyr	Ile	Arg	Leu	Glu	
		435					440					445				
ctt	gat	aaa	aaa	cta	tgg	aac	ctt	caa	aga	gaa	gtt	gat	aag	aat	gcc	1392
Leu	Asp	Lys	Lys	Leu	Trp	Asn	Leu	Gln	Arg	Glu	Val	Asp	Lys	Asn	Ala	
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tat	cgt	gct	ggt	tta	aat	atg	aag	tat	caa	ttc	taa					1428
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Lys Gln Arg Leu Arg Thr Gln Ile Asp Ile Val Ala Ser Glu Ser Leu
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Arg Met Gly Leu Gln Pro Tyr Val Leu Pro Gly Phe Val Ala Gly Ser
 100 105 110

Thr Ile Leu Asp Ala Asp Gly Ala Gly Val Thr Val Ser Ala Val Phe
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